



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

FEB 26 2015

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Barry A. Smith
Environmental Engineer
Steel Dynamics, Inc.
4500 County Road 59
Butler, Indiana 46721

Re: Notice of Violation and Finding of Violation
Steel Dynamics, Inc., Butler, Indiana

Dear Mr. Smith:

The U.S. Environmental Protection Agency is issuing the enclosed Notice of Violation and Finding of Violation (NOV/FOV) to Steel Dynamics, Inc. (SDI) under Section 113(a)(1) and (a)(3) of the Clean Air Act, 42 U.S.C. § 7413(a)(1) and (a)(3). We find that SDI is violating the Indiana State Implementation Plan, the New Source Performance Standards, the National Emission Standards for Hazardous Air Pollutants, and its Title V permits at the facility in Butler, Indiana.

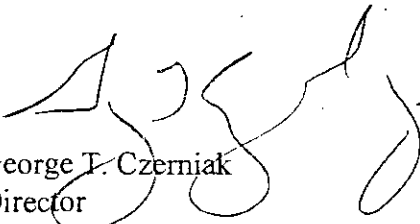
Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the NOV/FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply, and the steps you will take to prevent future violations. In order to make the conference more productive, we encourage you to submit information responsive to the NOV/FOV to us prior to the conference date.

Please plan for your technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contact in this matter is Dakota Prentice. You may call him at (312) 886-6761 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,



George T. Czerniak
Director
Air and Radiation Division

Enclosure

cc: Phil Perry, Chief, Air Compliance and Enforcement Branch, IDEM

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:

**Steel Dynamics, Inc.,
Butler, Indiana**

Proceedings Pursuant to
The Clean Air Act
42 U.S.C. § § 7401

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) **NOTICE OF VIOLATION and
FINDING OF VIOLATION**

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) **EPA-5-15-IN-02**
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NOTICE AND FINDING OF VIOLATION

The U.S. Environmental Protection Agency (EPA) is issuing this Notice of Violation and Finding of Violation (NOV/FOV) under Sections 113(a)(1) and (a)(3) of the Clean Air Act (the Act), 42 U.S.C. § 7413(a)(1) and (a)(3). EPA finds that Steel Dynamics, Inc. (SDI) is violating the Indiana State Implementation Plan (SIP), the New Source Performance Standards (NSPS), the National Emission Standards for Hazardous Air Pollutants (NESHAP), and its Title V permits, at its Butler, Indiana facility (the Facility) as follows:

Statutory and Regulatory Authority

New Source Performance Standards – General Provisions

1. Section 111(b) of the Act, 42 U.S.C. § 7411(b), requires EPA to publish a list of categories of stationary sources and, within a year after the inclusion of a category of stationary sources in the list, to publish proposed regulations establishing federal standards of performance for new sources within the source category. These emission standards are known as the New Source Performance Standards (NSPS).
2. 40 C.F.R. Part 60, Subpart A (NSPS Subpart A), contains the General Provisions for the NSPS.
3. The provisions of NSPS Subpart A apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility. 40 C.F.R. § 60.1(a).
4. 40 C.F.R. § 60.11(d) states in part, at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.

The NSPS for Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983 – 40 C.F.R Part 60. Subpart AAa

5. On October 31, 1984, EPA promulgated the Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983 at 40 C.F.R. Part 60, Subpart AAa (Subpart AAa). 49 Fed. Reg. 43845
6. Subpart AAa applies to EAFs that commenced construction, modification, or reconstruction after August 17, 1983. 40 C.F.R. § 60.270a(b).
7. Pursuant to 40 C.F.R. § 60.274a(b), the owner or operator subject to the provisions of this subpart shall check and record on a once-per-shift basis the furnace static pressure (if direct-shell evacuation control system (DEC) system is in use, and a furnace static pressure gauge is installed according to paragraph (f) of this section) and either: check and record the control system fan motor amperes and damper position on a once-per-shift basis; install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood; or install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and check and record damper positions on a once-per-shift basis.
8. Pursuant to 40 C.F.R. § 60.276a(a), records of the measurements required in § 60.274a must be retained for at least 2 years following the date of the measurement.

National Emission Standards for Hazardous Air Pollutants – General Provisions (Subpart A)

9. Section 112 of the Act, 42 U.S.C. § 7412, requires EPA to promulgate a list of all categories and subcategories of major sources and area sources of hazardous air pollutants (HAP) and establish emissions standards for the categories and subcategories. These emission standards are known as the National Emission Standards for Hazardous Air Pollutants (NESHAP).
10. “Hazardous air pollutant” means “any air pollutant listed in or pursuant to” Section 112(b) of the Act. 42 U.S.C. § 7412(a)(6).
11. “Major sources” means any stationary source that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants. 42 U.S.C. § 7412(a)(1)
12. “Area source” means any stationary source of hazardous air pollutants that is not a major source. 42 U.S.C. § 7412(a)(2)
13. 40 C.F.R. Part 63, Subpart A, contains the General Provisions for the NESHAP.
14. 40 C.F.R. § 63.6(e)(1)(i) states in part, “at all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring

equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.”

The NESHAP for Electric Arc Furnace Steelmaking Facilities – Subpart YYYYYY

15. Pursuant to Section 112 of the Act, the EPA promulgated the NESHAP for Electric Arc Furnace Steelmaking Facilities at 40 C.F.R. Part 63, Subpart YYYYYY, 40 C.F.R. §§ 63.10680 - 63.10692, on December 28, 2007. 72 Fed. Reg. 74111.
16. The NESHAP at 40 C.F.R. Part 63, Subpart YYYYYY, applies to an owner or operator of an EAF steelmaking facility that is an area source of HAP emissions. 40 C.F.R. § 63.10680(a).
17. Table 1 of 40 C.F.R. Part 63, Subpart YYYYYY incorporates § 63.6(e)(1)(i) by reference.

Title V Permit Program

18. Title V of the Act, 42 U.S.C. §§ 7661-7661f, established an operating permit program for major sources of air pollution.
19. In accordance with Section 502(b) of the Act, 42 U.S.C. § 7661a(b), EPA promulgated regulations establishing the minimum elements of a Title V permit program to be administered by any air pollution control agency. *See* 57 Fed. Reg. 32295 (July 21, 1992). Those regulations are codified at 40 C.F.R. Part 70.
20. Section 502(d) of the Act, 42 U.S.C. § 7661a(d), provides that each state must submit to the EPA a permit program meeting the requirements of Title V.
21. On August 15, 1995, EPA approved the State of Ohio’s operating permit program with an effective date of October 1, 1995. *See* 40 C.F.R. Part 70, Appendix A.
22. Section 502(a) of the Act, 42 U.S.C. § 7661a(a), and 40 C.F.R. § 70.7(b) provide that, after the effective date of any permit program approved or promulgated under Title V of the Act, no source subject to Title V may operate except in compliance with a Title V permit.
23. 40 C.F.R. § 70.6(b)(1) provides that all terms and conditions in a Title V permit are enforceable by EPA.

Flat Roll Division Permits

24. IDEM issued a Part 70 Operating Permit, No. 033-28134-00043, on December 30, 2009 (2009 FRD Title V Permit).
25. Subsequent to the 2009 Title V Permit, IDEM issued the following permits to the Flat Roll Division plant: Part 70 Operating Permit, No. 033-28510-00043, on February 11, 2011 (February 2011 FRD Title V Permit); Minor Source Modification to a Part 70 Source Permit, No. 033-30828-00043, on September 13, 2011 (September 2011 FRD

Title V Permit); Part 70 Operating Permit, No. 033-30847-00043, on November 7, 2011 (November 2011 FRD Title V Permit); Minor Source Modification to a Part 70 Source Permit, No. 033-32483-00043, on February 4, 2013 (February 2013 FRD Title V Permit); Part 70 Operating Permit, No. 033-32660-00043, on April 24, 2013 (April 24th 2013 FRD Title V Permit); Part 70 Operating Permit, No. 033-32147-00043, on April 26, 2013 (April 26th 2013 FRD Title V Permit); Part 70 Operating Permit, No. 033-33268-00043, on August 28, 2013 (August 2013 FRD Title V Permit); Part 70 Operating Permit, No. 033-34479-00043, on May 19, 2014 (2014 FRD Title V Permit).

26. Condition D.1.2(a)(1) of all FRD Title V Permits from the 2009 FRD Title V Permit through the 2014 FRD Title V Permit states in part that the PM/PM10 emissions from EAF #1 South shall be controlled by a direct shell evacuation (DSE) system and canopy hood with 100 percent overall capture exhausted to EAF Baghouse 1, with a minimum 99.85 control efficiency for filterable PM/PM10, discharging through Stack 01.
27. Condition D.1.2(a)(2) of all FRD Title V Permits from the 2009 FRD Title V Permit through the 2014 FRD Title V Permit states in part that the PM/PM10 emissions from EAF #2 North shall be controlled by a DSE system and canopy hood with 100 percent overall capture exhausted to EAF Baghouse 2, with a minimum 99.85 control efficiency for filterable PM/PM10, which discharges through Stack 92.
28. Condition D.2.1(a) of all FRD Title Permits from the November 2011 FRD Title V Permit through the 2014 FRD Title V Permit states in part that PM/PM-10 emissions from the ladle metallurgical stations (LMS) and stir stations shall be captured by a side draft hood and exhausted to the LMF baghouse to Stack 61.
29. Condition D.4.5(a) of the February 2011 FRD Title V Permit and September 2011 FRD Title V Permit states in part that the Permittee shall record the flow rate of the packed scrubber used in conjunction with the Pickling Line, at least once per day when the Pickling Line is in operation.
30. Condition D.4.7(a) of the February 2011 FRD Title V Permit and September 2011 FRD Title V Permit states in part that to document compliance with Condition D.4.5 - Parametric Monitoring, the Permittee shall maintain records of the once per day pickle line scrubber flow rate during normal operation.
31. Condition C.17(a) of the February 2011 FRD Title V Permit and September 2011 FRD Title V Permit states in part that records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five years from the date of monitoring sample, measurement, report, or application.

Iron Dynamics Division Permits

32. IDEM issued a Part 70 Operating Permit, No. T033-12614-00076, on February 19, 2010 (February 2010 IDD Title V Permit).
33. Condition C.16(a) of the February 2010 IDD Title V Permit states in part that upon detecting an excursion or exceedance, the Permittee shall restore operation of the

emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

34. Condition D.1.15(a) of the February 2010 IDD Title V Permit states in part that when any of the pressure drop readings at the rotary hearth furnace (RHF) is outside the normal range of 4.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Condition C.16(a) above, of the February 2010 IDD Title V Permit.

Relevant Factual Background

35. SDI owns and operates two plants at the Facility in Butler, Indiana.
36. The two plants, the Flat Roll Division (FRD), and Iron Dynamics Division (IDD), operate under two separate Title V permits, but are considered one source by IDEM. The violations alleged in this NOV/FOV pertain to FRD and IDD.
37. EAF #1 South at the FRD is subject to 40 C.F.R. Part 60, Subpart AAa, because it is an EAF that was permitted for construction in 1994.
38. EAF #2 North at the FRD is subject to 40 C.F.R. Part 60, Subpart AAa, because it is an EAF that was permitted for construction in 1997.
39. EAF #1 South and EAF #2 North at the FRD are subject to 40 C.F.R. Part 63, Subpart YYYYYY, because they are EAFs located at an area source for hazardous air pollutants (HAPs).
40. EPA conducted an inspection of the Facility on August 27, 2012, to assist in determining compliance with the Clean Air Act, the Indiana SIP, and the facility's Title V Permits.
41. EPA issued to SDI an information request under Section 114 of the CAA on January 30, 2013. SDI submitted a response on May 20, 2013 (2013 Information Request Response).
42. EPA issued SDI a second information request under Section 114 of the CAA on February 4, 2014. SDI submitted a response on May 1, 2014.

FRD Monitoring Requirements - NSPS AAa

43. At EAF #1 South and EAF #2 North, SDI only maintains records of baghouse fan amps and does not maintain records of damper position, as required by 40 C.F.R. § 60.274a(a)(2)(b).

FRD Permits

44. SDI's 2011 Air Emission Statement Certification submitted to IDEM states that the capture efficiency at EAF #1 South and EAF #2 North is 98.000% and that the overall control efficiency at EAF #1 South and EAF #2 North for emissions of PM10 and PM2.5

is 97.853%, Conditions D.1.2(a)(1) and D.1.2(a)(2) of the FRD Title V Permits require a capture efficiency of at least 100% and an overall control efficiency of 99.85%.

45. In the 2013 Information Request Response, SDI stated that flow rate records for the scrubber used to control emissions at the Pickling Line were no longer available for April 9, 2011 through April 11, 2011 and April 22, 2011 through October 4, 2011.

FRD Ventilation Study

46. A ventilation study, dated March 3, 2012, was performed at FRD by VH Enterprises, Inc. (2012 Ventilation Study).
47. The 2012 Ventilation Study observed deficiencies in the capture system associated with EAF #2 North. The study recommended extension of the canopy hood at EAF #2 North, due to observations of a "failure to capture the plume" of emissions.
48. The 2012 Ventilation Study observed deficiencies in the capture system associated with the Ladle Metallurgical Stations (LMS). The study recommended the installation of an additional dedicated baghouse for the Ladle Metallurgical Furnace (LMF) 3 as "the existing baghouse is only marginally large enough for No. 1 and No. 2 LMF's."

Iron Dynamics Division Pressure Drop Deviations

49. In the 2013 Information Request Response, SDI provided the pressure drop operating range established by operating practice and stack test data for the RHF of 7.5 – 12.5" H₂O. According to the daily pressure drop data submitted covering January 2011 – January 2013, SDI operated outside of that range 17.3% of the operating days. Of the days that SDI operated outside the range, 60% of those were consecutive days.

Alleged Violations

50. By failing to monitor, record, and maintain records of the damper positions at EAF #1 South and EAF #2 North, SDI violated, and continues to violate, 40 C.F.R. § 60.274a(b) and 40 C.F.R. § 60.276a.
51. By failing to maintain 100 percent overall capture and 99.85 control efficiency at EAF #1 South and EAF #2 North, SDI violated, and continues to violate, Conditions D.1.2(a)(1) and D.1.2(a)(2) of its Title V Operating Permits.
52. By failing to make improvements to capture system needed to adequately capture the emission plume at EAF #2 North in accordance with good air pollution control practices, SDI violated, and continues to violate 40 C.F.R. § 60.11(d) and 40 C.F.R. § 63.6(e)(1)(i).
53. By failing to add additional baghouse capacity needed to capture and exhaust emissions from the LMS to the LMF baghouse, SDI violated, and continues to violate Condition D.2.1(a) of its Title V Operating Permits.

54. By failing to maintain scrubber flow rate records for five years, SDI violated Conditions C.17(a), D.4.5(a), and D.4.7(a) of its Title V Operating Permits.
55. By failing to operate within the pressure drop range established during the latest stack test and take reasonable response steps to return the control device to its normal operation as expeditious as practicable, SDI violated Condition C.16(a) and D.1.15(a) of the February 2010 IDD Title V Permit.

Environmental Impact of Violations

56. These violations have caused or can cause excess emissions of PM and NO_x:

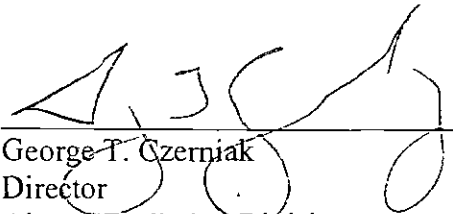
Particulate Matter: Particulate matter, especially fine particulates contains microscopic solids or liquid droplets, which can get deep into the lungs and cause serious health problems. Particulate matter exposure contributes to:

- irritation of the airways, coughing, and difficulty breathing;
- decreased lung function;
- aggravated asthma;
- chronic bronchitis;
- irregular heartbeat;
- nonfatal heart attacks; and
- premature death in people with heart or lung disease.

Nitrogen Oxides: Current scientific evidence links short-term NO_x exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. In addition, studies show a connection between breathing elevated short-term NO_x concentrations, and increased hospital admissions for respiratory issues, especially asthma.

Date

2/26/15


George T. Czerniak
Director
Air and Radiation Division

CERTIFICATE OF MAILING

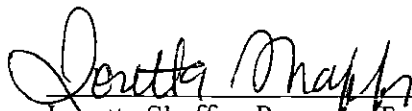
I, Loretta Shaffer, certify that I sent a Notice of Violation and Finding of Violation, No. EPA-5-15-IN-02, by Certified Mail, Return Receipt Requested, to:

Mr. Barry A. Smith
Environmental Engineer
Steel Dynamics, Inc.
4500 County Road 59
Butler, Indiana 46721

I also certify that I sent copies of the Notice of Violation and Finding of Violation by first-class mail to:

Phil Perry, Chief
Air Compliance and Enforcement Branch
Indiana Department of Environmental
Management
100 N. Senate Ave.
Mail Code 61-53 IGCN 1003
Indianapolis, IN 46204-2251

On the 27 day of February 2015.



Loretta Shaffer, Program Technician
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER: 7011 1150 0000 2640 5564